

Message Text

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ACTION NASA-02

INFO OCT-01 EUR-12 ISO-00 ACDA-05 CIAE-00 DODE-00 PM-03

INR-07 L-02 NSAE-00 NSC-05 RSC-01 OES-03 PRS-01

USIA-06 PA-01 SP-02 AEC-05 FEAE-00 EB-07 COME-00

INT-05 AECE-00 /068 W

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P 031137Z FEB 75

FM AMEMBASSY BUCHAREST

TO SECSTATE WASHDC PRIORITY 1611

INFO NSF

C O N F I D E N T I A L SECTION 1 OF 2 BUCHAREST 0433

NSF FOR HULL

E.O. 11652: GDS

TAGS: TSPA, RO

SUBJ: SPACE COOPERATION: ROMANIAN PROPOSAL

REF: (A) STATE 020934, (B) STATE 018791, (C) BUCHAREST 0288,
(D) BUCHAREST 0416, (E) STATE 022285, (F) STATE 282599

1. ROMANIAN SPACE COMMISSION ACCEPTS NASA PROPOSAL FOR MARCH 12-26 VISIT (REF A). COMMISSION ALSO REQUESTS THAT JPL BE INCLUDED IN ITINERARY, EVEN THOUGH VISIT WOULD BE SHORT. DETAILED BIO DATA FROM DELEGATION MEMBERS AND BACKGROUND INFORMATION ABOUT NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY AND ROMANIAN COMMISSION FOR SPACE ACTIVITIES BEING POUCHED TO FRUTKIN.

2. GOR ACCEPTS EMBASSY FORMULA THAT "CONFIDENTIALITY" BE LIMITED TO DISCUSSION TOPICS AS MUTUALLY AGREED UPON AFTER DELEGATION'S ARRIVAL WASHINGTON. FURTHER AGREED THAT MAJOR GENERAL ANDRESCU WILL TRAVEL OUT OF UNIFORM. ROMANIANS PREFER DELEGATION MAINTAIN LOW PROFILE, WITH PUBLIC ANNOUNCEMENTS CONFINED TO FACTUAL STATEMENT OF DELEGATION'S PRESENCE

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IN US TO DISCUSS TECHNICAL MATTERS OF POSSIBLE COOPERATIVE

INTEREST BETWEEN THE US AND ROMANIA. EMBASSY WILL CABLE GOR'S REACTION TO HANDLING ADVANCE PUBLICITY FOLLOWING RECEIPT OF NASA PROGRAM. NASA MAY EXPECT ROMDEL TO RAISE ADDITIONAL TOPICS OF MORE CONFIDENTIAL NATURE THAN THOSE LISTED BELOW.

3. FOLLOWING IS COMPLETE AND FORMAL TRANSLATION OF 21 DISCUSSION TOPICS PROPOSED BY ROMDEL, WITH IDENTIFICATION OF PARTICIPATING INSTITUTIONS. TEXT SUPERSEDES REF C PARA 4. BEGIN TEXT: SUGGESTED TOPICS FOR COOPERATION BETWEEN NASA AND DESIGNATED EXECUTIVE INSTITUTIONS IN ROMANIA.

A) ANALYSIS OF LUNAR ROCKS

1) QUANTITATIVE AND QUALITATIVE STUDY OF PHASES IN LUNAR SAMPLES AND COMPARATIVE STUDY OF CONDRIITIC METEORITES (ROMANIAN COLLECTION) AND LUNAR SAMPLES BY THE FOLLOWING METHODS: CHEMICAL COMPOSITION BY MEANS OF X-RAY FLOURESCENCE ANALYSIS EXCITED BY RADIOACTIVE SOURCES OR CHARGED PARTICLES; MICROSCOPE AND ELECTRON MICROSCOPE CRYSTALLOGRAPHIC ANALYSES; THERMAL METHODS FOR STUDY OF PHASES AND PHASE TRANSFORMATIONS.

- CENTRAL INSTITUTE OF CHEMICAL RESEARCH, BUCHAREST
- INSTITUTE FOR NUCLEAR PHYSICS, BUCHAREST

2) RESEARCH ON THE CHEMICAL AND ISOTOPIC COMPOSITION OF THE LUNAR SOIL: ANALYSES OF LUNAR SAMPLES, INCLUDING TRAPPED GASES AS WELL AS SOLID ELEMENTS, BUT MEANS OF MASS SPECTROMETRY (ELECTRON BOMBARDMENT, ION SPUTTERING, SPARK AND THERMIONIC ION SOURCES) AND AUGERELECTRON SPECTROSCOPY.

- CENTRAL INSTITUTE OF CHEMICAL RESEARCH, BUCHAREST
- INSTITUTE FOR STABLE ISOTOPES, CLUJ

3) LUNAR SAMPLE AND METEORITE ANALYSES AND CHRONOLOGY (AGE DATING) BY FOSSIL/COSMIC HEAVY-ION TRACKING METHOD AND THERMOLUMINESCENCE DOSIMETRY.

B) SATELLITE AND SPACE VEHICLE INSTRUMENTATION

4) STUDY OF THE ISOTOPIC COMPOSITION OF UPPER ATMOSPHERE BY MASS SPECTROMETRY: DEVELOPMENT OF A MASS

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SPECTROMETER AND A DEVICE FOR IN-FLIGHT MASS SPECTROMETER CALIBRATION FOR DETERMINING ISOTOPIC NITROGEN COMPOSITION OF THE UPPER ATMOSPHERE.

- INSTITUTE FOR ATOMIC PHYSICS, BUCHAREST
- INSTITUTE FOR STABLE ISOTOPES, CLUJ

5) STUDY OF H2, D2, AND T2 SORPTION ON METALLIC SURFACES, AND THIN FILM EVAPORATION INDUCED BY COSMIC RAYS:

DEVELOPMENT OF A PIEZOELECTRIC BALANCE AND A MASS SPECTROMETER CALIBRATOR WITH THE OBJECT OF DETERMINING THE ORIGIN OF COSMIC HYDROGEN AND TO STUDY SORPTION MECHANISMS AND THIN METALLIC FILM EVAPORATION INDUCED BY COSMIC RAYS.

- INSTITUTE FOR STABLE ISOTOPES, CLUJ

6) DEVELOPMENT OF A DOUBLE FOCUS MASS SPECTROMETER WITH RESOLUTION GREATER THAN 1000: THE SPECTROMETER WOULD BE USED FOR IDENTIFYING ORGANIC MOLECULES AND THEIR ISOTOPIC COMPOSITION IN THE UPPER ATMOSPHERE AND IN PLANETARY ATMOSPHERES.

- INSTITUTE FOR STABLE ISOTOPES, CLUJ

7) INVESTIGATION OF THE POSSIBLE EXISTENCE OF VERY HEAVY AND SUPER HEAVY ATOMIC NUCLEI AND POSSIBLE ANTI-NUCLEI IN GALACTIC COSMIC RADIATION BY MEANS OF SILVER CHLORIDE MONO-CRYSTALS EXPOSED INSIDE AN ORBITING SPACE LABORATORY.

- INSTITUTE FOR ATOMIC PHYSICS, BUCHAREST

8) UPPER-ATMOSPHERIC TESTING (ON A METEOROLOGICAL ROCKET) OF A DEVICE FOR MEASURING THE CONCENTRATION OF ATOMIC NITROGEN: SUCCESSFUL EXPERIMENTS COULD LEAD TO THE DEVELOPMENT OF A MORE SENSITIVE DEVICE FOR USE ON BOARD SATELLITES (THIN FILMS ARE USED AS THE SENSITIVE ELEMENT).

- CENTRAL INSTITUTE OF CHEMICAL RESEARCH, BUCHAREST

- CENTER OF PHYSICAL CHEMISTRY, BUCHAREST

9) PROTON MAGNETOMETER FOR MAGNETIC FIELD MEASUREMENTS (TOTAL INTENSITIES WITHIN THE RANGE OF 10,000 TO 100,000 GAMMA) WITH AN ACCURACY OF PLUS OR MINUS ONE GAMMA AND A SAMPLING RATE OF 10 SECONDS.

- INSTITUTE FOR NUCLEAR PHYSICS, BUCHAREST

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INFO OCT-01 EUR-12 ISO-00 ACDA-05 CIAE-00 DODE-00 PM-03

INR-07 L-02 NSAE-00 NSC-05 RSC-01 OES-03 PRS-01

USIA-06 PA-01 SP-02 AEC-05 FEAE-00 EB-07 COME-00

INT-05 AECE-00 /068 W

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TO SECSTATE WASHDC PRIORITY 1612

INFO NSF

C O N F I D E N T I A L SECTION 2 OF 2 BUCHAREST 0433

C) REMOTE SENSING OF EARTH RESOURCES

10) USE OF ERTS DATA FOR INVESTIGATING NATURAL RESOURCES
IN THE DANUBE DELTA AND BLACK SEA COASTAL SEDIMENTS.

- COLLEGE FOR CIVIL ENGINEERING, BUCHAREST
- ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCES, BUCHAREST
- INSTITUTE FOR GEOLOGY AND GEOPHYSICS, BUCHAREST

11) ESTABLISHMENT OF A STATION FOR THE DIRECT RECEPTION
OF REMOTE SENSING DATA FROM SATELLITES, A DATA PROCESSING
CENTER, AND A CENTER FOR STAFF TRAINING IN THE FIELD OF
REMOTE SENSING.

- NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

D) SATELLITE-BASED RESEARCH

12) LABORATORY SIMULATION OF PLANETARY ATMOSPHERES AND
THE STUDY OF REACTIONS WHICH OCCUR WITHIN THESE ATMOSPHERES
INDUCED BY RADIATION FLUX AND PARTICLES FROM INTERPLANETARY
SPACE.

- INSTITUTE FOR STABLE ISOTOPES, CLUJ

13) DETERMINATION OF TERRESTRIAL AND MARINE GEODESIC
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COORDINATES FOR EMPLACEMENT OF OFF-SHORE DRILLING RIGS AND
FOR GEOLOGIC PROSPECTING (COOPERATION WITH NASA FOR A
DOPPLER STATION AND LASER TELEMETRY).

14) THEORETICAL AND EXPERIMENTAL INVESTIGATIONS OF A
SYSTEM FOR THE CONVERSION OF THE FIELD ENERGY OF MICROWAVES
IN A HIGH-TENSION CONTINUOUS CURRENT WITH APPLICATIONS TO
SATELLITE SYSTEMS USING SOLAR ENERGY (SATELLITE SOLAR
POWER STATIONS).

- POLYTECHNIC INSTITUTE, BUCHAREST

E) GROUND-BASED RESEARCH

15) THE STUDY OF CHEMICAL REACTIONS IN THE UPPER ATMOSPHERE: CATALYTIC EFFICIENCY OF CERTAIN METALS AND ALLOYS IN THE ATOMIC RECOMBINATION REACTION.

- CENTRAL INSTITUTE OF CHEMICAL RESEARCH, BUCHAREST
- CENTER FOR PHYSICAL CHEMISTRY, BUCHAREST

16) AEROSPACE TRIBOLOGY (INFLUENCE OF INERTIAL FORCES AND TURBULANCE ON FILM LUBRICATION AT HIGH SPEEDS AND/OR HIGH REYNOLDS NUMBERS) WITH APPLICATIONS TO BEARING LUBRICATION WITH LIQUIFIED METALS AND GASES.

- POLYTECHNIC INSTITUTE, BUCHAREST

17) INVESTIGATIONS OF AERODYNAMIC FLUTTER OF LIFTING SURFACES TO DETERMINE THE QUALITATIVE AND QUANTITATIVE EFFECTS OF THRUST (BY PROPULSION GROUPS) AND AERODYNAMIC DRAG (BY AIR BRAKES).

- POLYTECHNIC INSTITUTE, BUCHAREST

18) FEASIBILITY OF SATELLITE-BASED STUDIES OF THE INFLUENCE OF INTERPLANETARY DISCONTINUITIES ON THE MAGNETOSPHERE AND IONOSPHERE FOR THE IMPROVEMENT OF FORECASTING GEOMAGNETIC AND RADIOCOMMUNICATION DISTURBANCES.

- PHYSICAL AND TECHNICAL RESEARCH INSTITUTE, IASI (JASSEY)

F) OTHER TOPICS OF PARTICULAR INTEREST TO THE ROMANIAN SIDE

19 TRAINING OF ROMANIAN ASTRONAUTS FOR POSSIBLE INCLUSION IN NASA'S FUTURE MANNED-SPACE MISSIONS.
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20) ESTABLISHMENT OF VHRR (VERY HIGH RESOLUTION) METEOROLOGICAL RECEPTION STATION AND MECHANISM FOR PROVIDING DATA FOR BOTH DOMESTIC AND NASA'S USE, AND TO ACCOMPLISH RESEARCH OF INTEREST TO NASA.

21) STAFF TRAINING IN THE FIELD OF REMOTE SENSING AND SOUNDINGS BY METEOROLOGICAL ROCKETS. END TEXT.
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Message Attributes

Automatic Decaptioning: X
Capture Date: 01 JAN 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: SCIENTIFIC COOPERATION, SPACE EXPLORATION, SPACE AGREEMENTS, MEETING PROCEEDINGS
Control Number: n/a
Copy: SINGLE
Draft Date: 03 FEB 1975
Decaption Date: 01 JAN 1960
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Authority: GolinoFR
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 28 MAY 2004
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1975BUCHAR00433
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: GS
Errors: N/A
Film Number: D750038-0928
From: BUCHAREST
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1975/newtext/t19750279/aaaacszc.tel
Line Count: 270
Locator: TEXT ON-LINE, ON MICROFILM
Office: ACTION NASA
Original Classification: CONFIDENTIAL
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 5
Previous Channel Indicators: n/a
Previous Classification: CONFIDENTIAL
Previous Handling Restrictions: n/a
Reference: 75 STATE 020934, 75 STATE 018791, 75 BUCHAREST 0288
Review Action: RELEASED, APPROVED
Review Authority: GolinoFR
Review Comment: n/a
Review Content Flags:
Review Date: 10 JUN 2003
Review Event:
Review Exemptions: n/a
Review History: RELEASED <10 JUN 2003 by ShawDG>; APPROVED <11 JUN 2003 by GolinoFR>
Review Markings:

Margaret P. Grafeld
Declassified/Released
US Department of State
EO Systematic Review
05 JUL 2006

Review Media Identifier:
Review Referrals: n/a
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
Secure: OPEN
Status: NATIVE
Subject: SPACE COOPERATION: ROMANIAN PROPOSAL
TAGS: TSPA, RO, US
To: STATE
Type: TE
Markings: Margaret P. Grafeld Declassified/Released US Department of State EO Systematic Review 05 JUL 2006